

a second ozone transfer unit having a second mass flow controller connected to the ozone generator, for receiving the ozone from the ozone generator to provide the reactor with a second ozone flow at a second flow rate for a thermal treatment on the wafer, the first and second mass flow controllers being connected parallel to each other between the ozone generator and the reactor, wherein one of the first and second mass flow controllers provides corresponding one of the first and second ozone flows to the reactor at a time;

an ozone control unit connected to the ozone generator in parallel with the first and second ozone transfer units, for receiving the ozone from the ozone generator to allow a certain amount of ozone to flow to the first and second ozone transfer units by removing an excessive amount of ozone generated by the ozone generator;

a first selection valve connected between the first and second ozone transfer units and the reactor, for controlling the first or second ozone flow from the first or second ozone transfer unit to the reactor; and

a second selection valve connected between the first and second ozone transfer units and the exhaust pump, for controlling the first or second ozone flow from the first or second ozone transfer unit to the exhaust pump, wherein the first and second selection valves perform opposite operations at a same time.

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2. (Three Times Amended) The semiconductor thin film deposition apparatus of claim 1, further comprising a main valve disposed between the ozone generator and the first and second ozone transfer units, for controlling a flow of the ozone from the ozone generator to the first and second ozone transfer units.

6. (Twice Amended) The semiconductor thin film deposition apparatus of claim 2, wherein the first ozone transfer unit further comprises:

C2
a first ozone transfer valve having an inlet connected to an outlet of the main valve of which inlet is connected to an outlet of the ozone generator, and an outlet connected to an inlet of the first mass flow controller; and

a second ozone transfer valve having an inlet connected to an outlet of the first mass flow controller and an outlet generating the first ozone flow to the first and second selection valves.

7. (Twice Amended) The semiconductor thin film deposition apparatus of claim 6, wherein the second ozone transfer unit further comprises:

a third ozone transfer valve having an inlet connected to the outlet of the main valve to which the inlet of the first ozone transfer valve is connected, and an outlet connected to an inlet of the second mass flow controller; and

a fourth ozone transfer valve having an inlet connected to an outlet of the second mass flow controller and an outlet generating the first ozone flow to the first and second selection valves.

C2
8. (Twice Amended) The semiconductor thin film deposition apparatus of claim 1, wherein the first flow rate of the first ozone flow is in a range from about 100 sccm to about 500 sccm.

9. (Twice Amended) The semiconductor thin film deposition apparatus of claim 8, wherein the second flow rate of the second ozone flow is in a range from about 100 sccm to about 20000 sccm.

C3
13. (Twice Amended) The semiconductor thin film deposition apparatus of claim 12, wherein the heat has a temperature in a range from about 300 °C to about 700 °C.